EARLY HEART ATTACK CARE (EHAC)

What is a Heart Attack?

The heart is a muscle that pumps blood, oxygen and nutrients to other muscles and organs in the body, and it receives the same life sustaining nourishment via blood vessels called coronary arteries. A heart attack generally occurs when the flow of oxygen-rich blood to the heart muscle is interrupted. Over time, coronary arteries become narrowed by a slow buildup of fatty deposits in the artery walls. These soft, mushy deposits, called plaque, are made mostly of cholesterol. A thin protective fibrous cap forms to cover the fatty deposits which results in narrowing of the vessel, restricts the amount of blood flow and eventually hardens the artery walls. If the fibrous cap ruptures, a clot forms at the site. When a clot occurs in this narrowed vessel, it can significantly or completely block the supply of blood and oxygen to the heart muscle beyond. A partial interruption in blood flow due to a narrowed artery can progress to a complete blockage in a matter of minutes. Partial or temporary interruption of blood flow cause injury to heart muscle cells and **Heart Attack Warning Signs** appear. With prolonged oxygen deprivation the heart muscle cells begin to die which constitutes a **Heart Attack**. Immediate medical attention is critical to survival and the quality of life post heart attack.

Heart Attack Warning Signs

Heart disease is the number one cause of death in the United States. Each year, approximately 1.2 million Americans suffer a heart attack, and nearly one-third of these individuals die, many before they reach the hospital. Signs and symptoms of a heart attack can be mild, gradually increase in intensity over hours or days, or be sudden and severe. Heart Attacks come in different sizes and shapes. People often dismiss heart attack warning signs and think they merely have heartburn, a pulled muscle or lack the energy they use to have, and some times it's just plain denial. The unfortunate result is that many people wait too long before getting help. **Heart Attacks Have Beginnings!**

- Many heart attacks, but not all, involve discomfort in the center of the chest that lasts for more than a few minutes, or it may go away and come back. The discomfort may feel like pressure, squeezing, fullness, or pain of variable intensity from mild to crushing.
- Discomfort or pain may be felt in other areas of the body – one or both arms, the upper back, neck, jaw, or stomach.
- Shortness of breath may occur with or before chest discomfort, and with or without exertion.
- Other symptoms include breaking out in a cold sweat, nausea or vomiting, light-headedness or a feeling of doom.

Heart Attack Signs in Women

Heart attacks are not just a man's problem. More women in the United States die of heart disease each year than men. Although women can experience the same symptoms that men describe, they often experience unique symptoms that differ from those experienced by men and sometimes go unnoticed. This is because smaller arteries may be blocked in women, whereas men often have blockage in the main arteries.

- Unexplained feelings of nervousness or anxiety
- Discomfort or pain between the shoulder blades
- Upper back pain
- Light-headedness, dizziness, fainting.
- Unusual fatigue beyond normal tiredness

*Symptoms can be subtle in the elderly regardless of gender: Sweating, Shortness of Breath, General Fatigue or Malaise.

Don't delay! Don't take chances! *If you even think about taking an aspirin because you have chest pain or other heart attack symptoms,* call 911 and seek medical attention immediately. Don't wait more than five minutes before calling for help. Call 911 is "Your First Point of Medical Care."

St. Mary's Health Center has been an Accredited Chest Pain Center since 2004

Preventing A Heart Attack—Major Risk Factors

Perhaps the only thing more important than early recognition is prevention. Learn your personal gender, age, race and family history risk factors for heart disease – *Know Your Numbers* – see your healthcare professional routinely.

- **High Blood Pressure**. High blood pressure increases the risk of coronary artery disease (CAD), and the buildup of "plaque." People with high blood pressure are more likely to develop CAD due to the extra pressure placed on the walls of the arteries.
- **Elevated Cholesterol.** Cholesterol is a fat-like substance made in the liver and is also found in foods such as meat, dairy, and eggs. Although cholesterol is necessary for certain bodily functions to occur, an overabundance can have detrimental effects. Blood tests determine whether cholesterol is under control and, if not, changes in diet and/or medication may be in order.
- **Diabetes.** Diabetics are at much greater risk of a heart attack than those without the disease. High levels of sugar in the blood system can narrow coronary arteries. Consequently, it is important for diabetics to keep their disease under control and maintain a healthy weight.
- **Obesity/Overweight.** Excess body fat, especially around the waist/abdomen, promotes development of heart disease and stroke, even if no other risk factors exist. Excess weight increases the heart's work. It also raises blood pressure, blood cholesterol and triglyceride levels, while it lowers HDL ("good cholesterol") levels. Obesity can also increase the risk of developing diabetes. Losing weight is difficult, but losing even as few as ten pounds can lower the risk for heart disease.
- **Stress.** It is impossible to eliminate all stress in life, but there are ways to reduce its effects on the heart. Yoga, breathing exercises and walking are just a few ways to help calm the body's harmful reaction to stressful situations. Try to achieve balance in life. Stress can be cumulative and can ultimately lead to high blood pressure, heart disease, and other physical side effects.
- **Quit Smoking**. Did you know that just one year after you quit, you'll cut your risk of coronary heart disease by 50%? Most cases of heart disease are caused by a condition known as atherosclerosis (coronary artery disease). Anything that causes coronary arteries to narrow or close can lead to a heart attack. The nicotine found in cigarettes destroys the cells that line the coronary arteries, elevates blood pressure, and increases the rate at which atherosclerosis occurs.
- **Exercise**. Just walking 30 minutes a day can lower your risk for heart attack and stroke. Exercise that increases your heart rate helps improve the heart's ability to pump making it a stronger "cardiovascular" machine, enabling it to supply oxygen more efficiently to the rest of the body.
- **Diet**. A healthy diet includes: fruits, vegetables, fish, lean protein, fiber-rich whole grains, nuts, legumes, seeds, is low in sodium and saturated fat, and limits sugar-sweetened beverages, processed meats and alcohol consumption.

Early Heart Attack Care (EHAC)

Know the early symptoms, such as mild or stuttering (comes and goes) chest pain, that are identified as major risk factors for heart attack. Adults often ignore these warnings and put themselves at risk for significant damage to the heart muscle, or even death. **85% of muscle damage takes place within the first two hours.** Take action early because time is muscle. **Call 911! Time Is Muscle** *and* **Time Wasted Is Muscle Lost!**

Why Call 911?

More than 50 % of all patients experiencing chest pain walk into the Emergency Department (ED) rather than arrive by Emergency Medical Services (EMS). The reasons are numerous, ranging from the instinct to just jump in the car and drive to the nearest hospital, to the misunderstanding that the ambulance is simply a transport vehicle. **Calling 911 starts treatment earlier. EMS is your "First Point of Medical Care."**

- **911** dispatchers are often trained to locate you quickly and assist in early treatment options.
- Many EMS providers can diagnosis a heart attack with an electrocardiogram (ECG), transmit the ECG to the hospital and begin treatment.
- EMS arrival enables the highly trained ED team to be ready, or notify the cardiologist and cath lab team, before you arrive at the hospital. This is called "Code STEMI" activation and it happens faster if you arrive by EMS, because when you walk into the ED, no one knows you're coming. This can be very important if you have a heart attack at 3am and the Code STEMI team needs to be called to come in after your heart attack has been diagnosed in the ED. **Time Is Muscle!**
- On occasion, the ED is bypassed and EMS goes directly to the cath lab because the Code STEMI team is ready and waiting.
- Be proactive – take care of yourself and those you love by promising to call **911**.

Sources: Society of Cardiovascular Patient Care, American Heart Association

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